भारतीय मानक Indian Standard

जिग बटन — विशिष्टि

IS 4294: 2018

(दूसरा पुनरीक्षण)

Jig Buttons — Specification

(Second Revision)

ICS 25.060.20

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FOREWORD

This Indian Standard (Second Revision) was adopted by the Bureau of Indian Standards on recommendation of the Machine Tools, Machine Tool Elements and Holding Devices Sectional Committee and approval of the Production and General Engineering Division Council.

This standard was first published in 1967 which was based on DIN 6321 : 1958 and subsequently revised in 1982. The experience gained in implementation of the standard has necessitated this revision.

In the formulation of this standard, considerable assistance has been derived from DIN 6321 : 2002 'Supporting and locating pins' issued by Deutsches Institut fur Normung (DIN).

Jig buttons are used as rests for work-pieces and work holders. The height l_1 has been toleranced at h9 to obviate the need for equalizing the heights after fitting when two or more of the buttons are used. This type of jig buttons may also be used as a lateral support. Tolerances g6 and p6 have been assigned to diameters d_1 and d_2 respectively.

Other types of locating pins, namely; locating pins, cylindrical and flatted are covered in IS 5093: 1996 'Locating pins (round) — Specification (*first revision*)' and IS 5094: 1969 'Dimensions for diamond locating pins'

The composition of the Committee responsible for the formulation of this standard is given in Annex A.

For the purpose of deciding whether a particular requirement of this standard is complied with the final value, observed or calculated, expressing the result of a test or analysis shall be rounded off in accordance with IS 2:1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

JIG BUTTONS — SPECIFICATION

(Second Revision)

1 SCOPE

This standard **c**overs the dimensions and material requirements for jig buttons.

2 REFERENCES

The standards given below contain provision which, through reference in this text, constitute provision of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

| IS No. | Title |
|---------------------|---|
| 2102 (Part 1): 1993 | General tolerances: Part 1 Tolerances for linear and angular dimensions without individual tolerance indications (third revision) |
| 3428 : 2009 | Dimensions for relief grooves (second revision) |

3 DIMENSIONS

The dimensions shall be as per Fig. 1.

4 MATERIAL

The material shall be tool steel, hardened to 55 to 60 HRC.

5 DESIGNATION

A jig button having $d_1 = 10$ mm and $l_1=6$ mm shall be designated as:

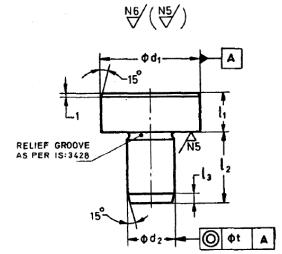
Jig Button 10 × 6 IS 4294

6 FINISH

The jig buttons shall be free from cracks, burrs, pits and other effects.

7 PRESERVATION AND PACKING

- **7.1** A suitable anti-corrosive surface treatment shall be given to jig buttons.
- **7.2** The jig button shall be packed in suitable cartons so as to prevent damage during transit.



| | All dimensions in millimetres. | | | | |
|-------|--------------------------------|-------|-------|-------|------|
| d_1 | $d_2^{(1)}$ | l_1 | l_2 | l_3 | t |
| g6 | p6 | h9 | | | |
| 6 | 4 | 5 | 6 | 1.2 | 0.02 |
| 8 | 6 | 5 | 9 | 1.6 | 0.02 |
| 10 | 6 | 6 | 9 | 1.6 | 0.02 |
| 12 | 6 | 6 | 9 | 1.6 | 0.02 |
| 16 | 8 | 8 | 12 | 2.0 | 0.04 |
| 20 | 12 | 8 | 18 | 2.5 | 0.04 |
| 25 | 12 | 10 | 18 | 2.5 | 0.04 |

1) Corresponding hole: Tolerance H7

NOTE — Dimensional deviations for untoleranced dimensions shall be of designation medium class 'm' as per IS 2102 (Part 1).

Fig. 1 Jig Buttons — Dimensions

8 MARKING

8.1 The carton containing jig button shall be marked with designation and the manufacturer's name or trade mark.

8.2 BIS Certification Marking

The jig button may also be marked with the Standard Mark.

8.2.1 The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act*, 2016 and the Rules and Regulations made there under. The details of the conditions under which the licence for use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

ANNEX A

(Foreword)

COMMITTEE COMPOSITION

Machine Tools, Machine Tool Elements and Holding Devices Sectional Committee, PGD 35

| Organization | Representative(s) |
|---|--|
| Central Institute of Tool Design, Hyderabad | Shri Shujayat Khan (<i>Chairman</i>) Shri Uday Bhaskar Reddy (<i>Alternate</i>) |
| ACE Designers Limited, Bengaluru | Shri Benedict Machad Shri T. P. Dridhar (<i>Alternate</i>) |
| Advanced Machine Tool Testing Facility, Bengaluru | Shri Balaramaiah |
| Atlas Engineering Industries (P) Ltd, Batala | Shri Rajesh Kawatra Shri Deepak Kawatra (<i>Alternate</i>) |
| Bajaj Auto Limited, Pune | Shri D. D. Pawar Shri S. D. Gupta (<i>Alternate</i>) |
| Bharat Dynamics Limited, Hyderabad | Shri K. Vishweshwar Rao |
| Bharat Fritz Werner Limited, Bengaluru | Shri Ashok N. Badhe Shri Venkatesh R. Habib (<i>Alternate</i>) |
| Bharat Heavy Electricals Limited, Trichurapalli | Shri Royston D'Souza |
| Central Manufacturing Technology Institute, Bengaluru | Shri S. V. Mansur Shri P. Rajasekhar (<i>Alternate</i>) |
| Central Mechanical Engineering, Research Institute, Durgapur | Shri Amit Jyoti Banerjee Dr Nagahanumaian (<i>Alternate</i>) |
| Department of Heavy Industry, Ministry of Heavy Industries & Public Enterprises, New Delhi | Shri N. L. Goswami |
| Directorate General of Quality Assurance, New Delhi | Lt Col Dharmendra Singh Shri N. K. Bhadwya (<i>Alternate</i>) |
| Directorate General of Supplies and Disposals, New Delhi | Shri Mohanty Shri N. K. Upadhay (<i>Alternate</i>) |
| Directorate of Standardization, New Delhi | Lt Col Praveen Deo Shri V. K. Chhabra (<i>Alternate</i>) |
| Guindy Machine Tools Ltd, Chennai | Shri R Harikrishnan Shri R. Marimuthu (<i>Alternate</i>) |
| HMT Machine Tools Limited, Bengaluru | Shri N. Marudhachalam Shri T. Saidulu (<i>Alternate</i>) |
| Indian Machine Tools Manufacturers Association, Gurugram | SHRI A. S. PUNDLE |
| ITI Limited, Bengaluru | Shri G. Perumalsamy Shri D. V. Jayram (<i>Alternate</i>) |
| Jainson Mechanical Works, Ludhiana | Shri Satpall Jain Shri Jinender Jain (<i>Alternate</i>) |
| Kennametal India Ltd, Bengaluru | Shri Arvinda Shetty B. Shri Rajesh Ramesh Parave (<i>Alternate</i>) |
| Micromatic Grinding Technologies Ltd, Ghaziabad/Bengaluru | Shri R. K. Mahajan Shri Mahesh Samaria (<i>Alternate</i>) |

Organization

Shri V. S. Goindi

Parisudh Machine Tools Pvt. Limited, Ghaziabad

Shri G. S. Goindi (Alternate)

Premier Limited, Pune

Shri S. D. Joshi

PSG College of Technology, Coimbatore

Rajesh D. Sharma (Alternate)

D: 1: : 1 C

Dr B. Giriraj

Dr P. V. Mohanram (Alternate)

Rites Limited, Gurugram

Shri Rajesh Aggarwal

Unison Clamping Devices Limited, Pune

SHRI PANDURANG KALLAPPA SAWANT
SHRI VIKRAM PANDURANG SAWANT (Alternate)

Representative(s)

BIS Directorate General

Shri A. Rengarajan, Scientist 'E' and Head (PGD) [Representing Director General (*Ex-officio*)]

Member Secretary
Shri Kundan Giri
Scientist 'B' (PGD), BIS

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This Indian Standard has been developed from Doc No.: PGD 35 (10217).

Amendments Issued Since Publication

| Amend No. | Date of Issue | Text Affected | |
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